

Using the Response Outreach Area Mapper (ROAM) to Locate and Learn about Hard-to-Count Areas

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www.census.gov/roam

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Suzanne McArdle began her career at the Census Bureau in 2008 as a cartographer. For the past three years, she has served as a team leader in the Cartographic Products & Services Branch. Suzanne leads the generalization team that produces cartographic boundary files to support mapping and data dissemination. She also leads the team that maintains the Census Automated Map Production System (CAMPS), which is a batch mapping system that produces large- and small-format maps to support various Census Bureau programs. She's also led several web mapping efforts in the branch. Suzanne grew up in Prince George's County, MD and earned a Bachelor's degree from Salisbury University and a Master's degree from East Carolina University, both in geography.



Overview

- Goal of the 2020 Census
- Purpose of ROAM
- Introduction to the Low Response Score
- Background on the Planning Database
- What is a Census Tract?
- Live Demo of ROAM
- Resources

The Goal of the 2020 Census

Count everyone once,
only once,
and in the right place.

Purpose of ROAM

- Web Mapping Application developed to:
 - Make hard-to-count areas easier to identify
 - Provide a socioeconomic and demographic characteristic profile of these areas
- Determining location and understanding those area's characteristics allows the Census Bureau to:
 - Tailor communications and partnership campaigns
 - Helps management plan for field resources
 - For example, how many staff to hire and what language skills should those staff have
- Informed decision-making efforts can help improve self-response rates

Introduction to the Low Response Score (LRS)

- LRS is a model-driven metric calculated in-house
- Calculated at the census tract and block group level
- Represents the predicted mail non-response rate
 - ...to be interpreted as the percentage of households predicted to not self-respond to the Decennial Census
- A *high* LRS indicates a predicted *low* self-response rate → harder-to-survey area
- LRS is stored in the Census Bureau's Planning Database (PDB)

Background on the Planning Database (PDB)

- Contains the LRS, a subset of American Community Survey 5-year estimates, and 2010 Census operational data
 - The LRS allows you to target hard-to-survey areas
 - The ACS estimates and 2010 Census data allow you to view the socioeconomic and demographic characteristics of the area to determine why it might be hard-to-count
- Available in two formats:
 - Comma delimited file (www.census.gov/research/data/planning_database)
 - Census API (www.census.gov/developers)
- ROAM is a mapping gateway into part of the PDB

What is a Census Tract?

- Small, relatively permanent statistical subdivisions of a county or equivalent entity
- Generally have a population size between 1,200 and 8,000; the optimum size considered ~4,000 people
- Generally follow visible and identifiable features but may also follow nonvisible legal boundaries
- Boundaries are delineated with the intention of being maintained over a long time for statistical comparison between censuses
- Occasionally split due to population growth or merged as a result of substantial population decline in an area
- Updated by local participants (tribal, state, and local governments) prior to each Decennial Census as a part of the Participant Statistical Areas Program (PSAP)
- Uniquely identified by STATEFP+COUNTYFP+TRACTCE (“GEOID” in ROAM)

Census Tracts: A Link Through Time

CENSUS TRACTS - Salt Lake County, UT

1970



Total Population: 458,607
Number of Tracts: 92

1980



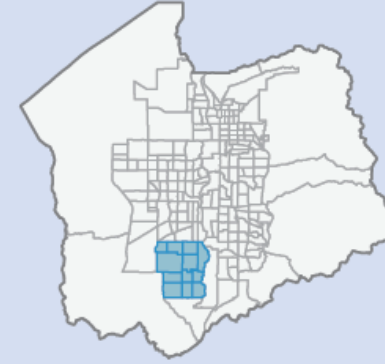
Total Population: 619,066
Number of Tracts: 116

1990



Total Population: 725,956
Number of Tracts: 156

2000



Total Population: 898,387
Number of Tracts: 193

2010

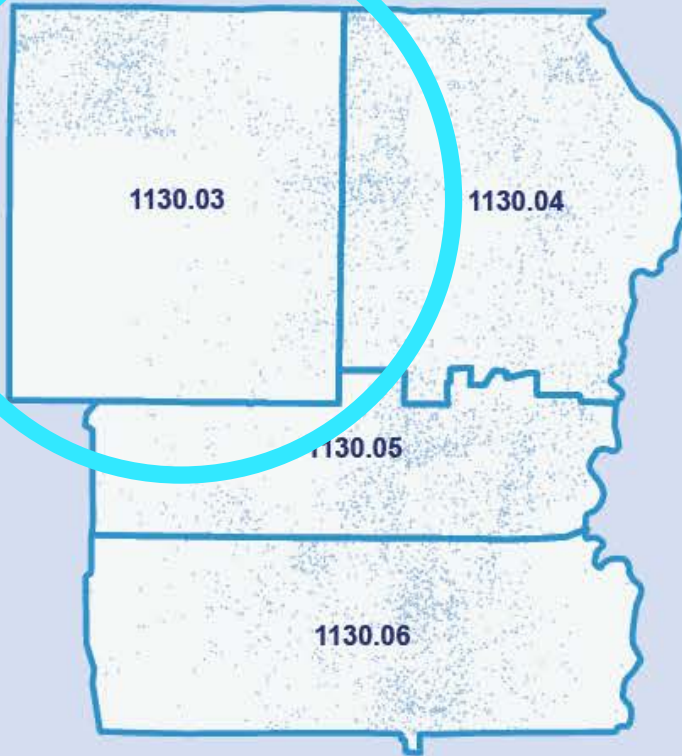


Total Population: 1,029,655
Number of Tracts: 212

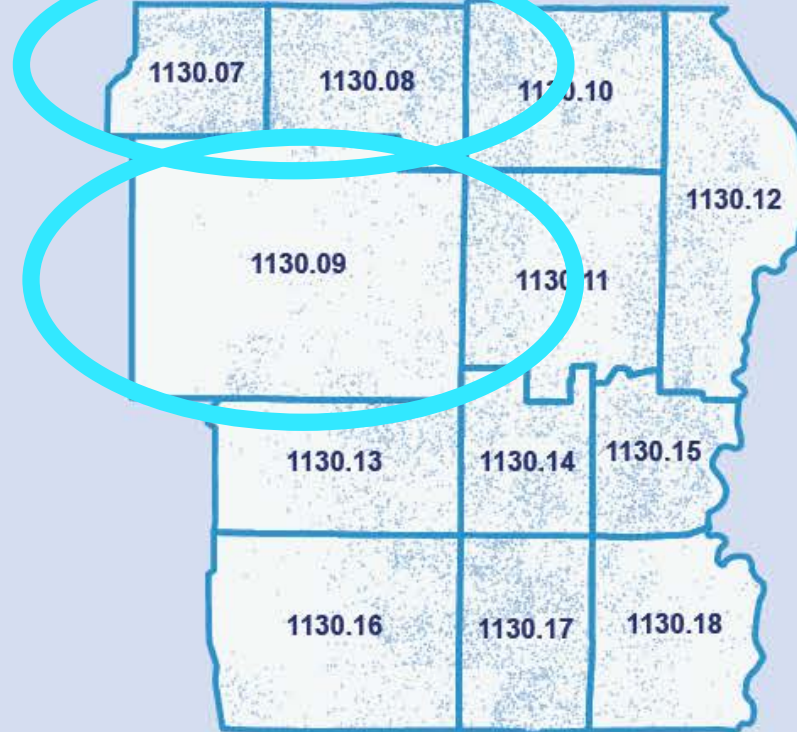
CENSUS TRACTS - Vicinity of South Jordan and Riverton, Utah

Population Distribution by Decade

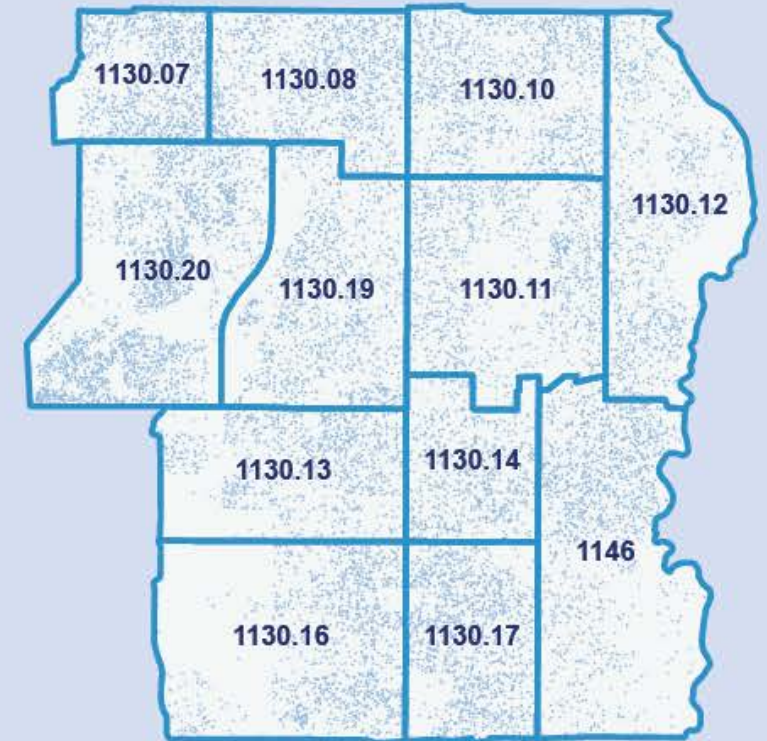
1990



2000



2010



One Dot Represents 10 People

ROAM Application (www.census.gov/roam)

- Accessible through a web browser (no download required)
- Hosted by the Census Bureau
- Provides a map and data table interface for users to identify and learn about hard-to-count census tracts

ROAM REST Services (for GIS users/web developers)

- Provide a way for web clients to communicate with Geographic Information System (GIS) servers
 - Third party web map application developers can use ROAM data as a source for their own applications
- The REST endpoints are available from www.census.gov/roam

ROAM REST Services

The GeoServices REST Specification provides a way for web clients to communicate with Geographic Information System (GIS) servers through Representational State Transfer (REST) technology.

To learn more about the GeoServices REST specification visit [Open APIs and Specifications](#).

Map Description	Map Service Links
Low Response Score by 2016 Census Tract; cached thematic map	ROAM/ROAM CACHE
2016 Census Tract data from 2018 Planning Database (and supporting 2016 geographic area boundaries)	ROAM/ROAM Dynamic

Resources

- To access the application and for additional information, please visit www.census.gov/roam
 - User Guide, Data Dictionary, Frequently Asked Questions, Quick Tips Guide, Fact Sheet
- Planning Database:
 - www.census.gov/research/data/planning_database
 - Questions about the Low Response Score or Planning Database can be directed to: *Census.PDB.questions@census.gov*

Questions?